THE CLAIMS

What is claimed is:

1. A detonating cord comprising an elongate tubular sheath encasing a solid core of an explosive material, the explosive material being comprised of a first explosive and a diluent, the diluent being present in an amount which reduces the velocity of detonation of the detonating cord as compared to that of an otherwise identical detonating cord in which the explosive material contains no diluent.

2. The detonating cord of claim 1 wherein the diluent comprises particles of an explosively inert material.

3. The detonating cord of claim 1 wherein the diluent comprises explosively inert microballoons.

4. The detonating cord of claim 3 wherein the microballoons are selected from the class consisting of glass microballoons and resin microballoons, the microballoons having a diameter of from about 10 to about 175 microns.

5. The detonating cord of claim 3 wherein the microballoons comprise resin microballoons.

6. The detonating cord of claim 5 wherein the microballoons have a diameter of from about 10 to about 175 microns.

7. The detonating cord of claim 6 wherein the microballoons comprise phenolic resin microballoons.

8. The detonating cord of claim 1 wherein the diluent comprises a second explosive material having a lower velocity of detonation than the first explosive material.

9. The detonating cord of claim 8 wherein the diluent comprises ammonium nitrate.

10. The detonating cord of any one of claims 1, 2, 3 or 8 containing from about 0.5 to 15% by weight of the diluent, based on the dry weight of the core.

11. The detonating cord of claim 10 containing from about 0.5 to 5% by weight diluent.

12. The detonating cord of any one of claims 1, 2, 3 or 8 wherein the first explosive is selected from the class consisting of PETN, HMX, HNS, TNC, PYX and RDX, and mixtures of two or more thereof.

13. In a method of cleaving a rock formation comprising drilling a plurality of substantially parallel boreholes into the formation to define between adjacent boreholes a web of rock interconnecting adjacent boreholes with each other, placing within the boreholes at least one length of detonating cord extending along the length of the respective boreholes, connecting the length of detonating cord to an explosive initiating device and initiating the length of detonating cord to cleave the formation;

the improvement comprising that the detonating cord comprises an elongate tubular sheath encasing a solid core of an explosive material, the explosive material being comprised of a first explosive and a diluent, the diluent being present in an amount which reduces the velocity of detonation of the detonating cord as compared to that of an otherwise identical detonating cord in which the explosive material contains no diluent.

14. The method of claim 13 wherein the explosive material contains from about 0.5 to 15% by weight of the diluent, based on the dry weight of the core.

15. The method of claim 13 wherein the explosive material contains from about 0.5 to 5% by weight of the diluent, based on the dry weight of the core.

16. The method of claim 13 wherein the first explosive is selected from the group consisting of PETN, HMX, HNS, TNC, PYX and RDX.

17. The method of claim 13 wherein the diluent comprises an explosively inert particulate material.

18. The method of claim 13 wherein the diluent comprises explosively inert microballoons.

19. The method of claim 13 wherein the diluent comprises a second explosive material having a lower velocity of detonation than the first explosive material.

20. The method of claim 18 wherein the microballoons comprise resin microballoons having a diameter of from about 10 to about 175 microns.

21. A method for making a detonating cord comprises the steps of preparing an explosive material by admixing a first explosive with a diluent selected from the group consisting of (a) explosively inert diluents; (b) a second explosive having a velocity of detonation less than that of the first explosive; and (c) mixtures of (a) and (b), the diluent being present in an amount which reduces the velocity of detonation of the detonating cord as compared to an otherwise identical detonating cord in which the explosive material contains no diluent; and

enclosing the explosive material within a tubular sheath to provide a detonating cord having a core of the explosive material.

22. The method of claim 21 including admixing sufficient diluent with the first explosive to provide in the core from about 0.5 to 15% by weight of the diluent, based on the dry weight of the core.

23. The method of claim 21 or claim 22 wherein the first explosive is selected from the class consisting of PETN, HMX, HNS, TNC, PYX and RDX, and mixtures of two or more thereof.

24. The method of claim 21 or claim 22 wherein the diluent comprises an explosively inert material.

25. The method of claim 24 wherein the diluent comprises explosively inert microballoons.

26. The method of claim 25 wherein the microballoons comprise resin microballoons.

27. The method of claim 26 wherein the microballoons comprise phenolic resin microballoons.

28. The method of claim 25 wherein the microballoons have a diameter of from about 10 to about 175 microns.